MARUTI SUZUKI

SERVICE MANUAL

MARUTI SUZUKI

DESERT STORM

northern motorsport

MOTORSPORT.IN

ADVISORY FOR SERVICE CREWS .

1. ALL SERVICE CREWS MUST BE REGISTERED WITH THE RALLY SECRETARIAT.

2. ALL SERVICE VEHICLES MUST DISPLAY SERVICE STICKERS.

3. ALL SERVICE VEHICLES MUST OBEY ROAD & TRAFFIC LAWS.

4. ANY DANGEROUS DRIVING BY SERVICE VEHICLES WILL LEAD TO SANCTIONS.

5. SPEED LIMIT IN ANY DESIGNATED SERVICE AREA IS 15 KMPH.

6. NO SMOKING IN DESIGNATED SERVICE AREA AT NIGHT HALT VENUES.

7. NO ACCOMMODATION IS AVAILABLE FOR THE SERVICE CREWS.

8. SERVICE CREW IS ADVISED TO CARRY SLEEPING BAGS .

9.OIL MAY NOT BE DISPOSED AT SERVICE AREA.

10. DO NOT LITTER THE AREA AROUND THE SERVICE AREA.

11. ALL DESIGNATED NON SERVICE AREAS TO BE STRICTLY CONFORMED TO.

12. ALL SPARE ENGINES /GEARBOX TO BE MARKED AT PRE EVENT INSPECTION.

13. FUEL BEING TRANSPORTED IN SERVICE VEHICLES SHOULD BE IN FUEL CANS.

14. IT IS ADVISABLE FOR SERVICE CREWS TO CARRY A FIRE EXTINGUISHER.

LEG 1A & B

SERVICE POINTS	*LOCATIONS*	*INSTRUCTIONS*	*VEHICLE*
Start of SS1	*Anywhere en route, from Kuber palace to start of SS1*	*From Sardarshahar start turn right on highway (towards Hanumangarh) continue straight to basel chowk and take the first exit left. Continue for 9.95 kms and then take the right turn.Service may be given on any desirable point on this route. Special Section starts about 3 kms ahead of spine 14 or 9.3 ams ahead of Mitasar near village Kundiya.*	*SERVICE 1*
End of SS1	*Near Rajasar*	*From Sardarshahar start turn right on highway. At 5.5kms take first exit left at round about (Basel chowk) towards Dungargarh. After 9.95 kms and take right turn at Sawai towards Mitasar/Kalu. About 4kms ahead of Mitasar there is a left fork going to Rajasar. Locate suitable point for service on road towards Rajasar.*	*SERVICE 2*
End of SS2	*Suitable place after Mitasar*	*From Sardarshahar liaison start turn right on highway. At 5.5kms km take round about left towards Dungargarh. Go 9kms and take right turn at Sawai towards Kalu on SH6A. After about 8 Kms you should be near Mitasar. Locate a suitable broad spot for service. Do not go in to the village road for service. After service follow competitor to Kuber Palace, Sardarshah for regroup halt.*	*SERVICE 1*
Regroup	*At Sardarshahar*	*Alternatively service vehicle waits at Sardarshar regroup point for service before entering regroup area.*	*SERVICE 2*

LEG 1A & B

SERVICE POINTS	*LOCATIONS*	*INSTRUCTIONS*	*VEHICLE*
Start & End of SS3	*Near Sardarshahar* *6 kms from start, on the Hanumangarh highway.*	*Follow competitor to start of SS3. Locate spot for service where the competitors leave highway.* ***Do not enter the single lane tarmac/dirt start connect road going off the main highway . **The end of SS3 is 4.3 kms from Basel chowk on the same Hanumangarh road, slightly short of the start turn off.***	*S1*
Start of SS4	*Near Amarsar*	*Escort competition vehicle to start of SS04 .Head towards Basel chowk and take the second exit from the round about, getting on the dungargarh road. 9.96 ams ahead turn right onto the Kalu/Lunkarnsar road.After 12.5 ams turn right towards Rajasar and carry on this road for another 6.5 ams and you reach Amarsar the start of stage.*	*S1*
End of SS04	*Nathwana, near Lunkaransar* *(80 kms from Sardarshahar)*	*From Sardarshahar start turn right on highway. At 5.5kms mark take round about left towards SriDungargarh. Go 9kms and take right turn at Sawai towards Lukaransar on SH60. Lunkaransar is 77kms on this road. Locate suitable point for service near main highway to Bikaner. Be aware that the link road between Nathwana and Lunkarnasar is narrow and not conducive to service. Escort competition vehicle to Bikaner after service.*	*S2*
End of leg. *Bikaner*	*Near Sadul Club, Bikaner*		*S1 & S2*

LEG 2

End of SS5	*Near Sattasar (15 kms from end of SS5. 110 kms from Bikaner)*	*Escort the competition vehicle to start of SS5. Continue straight on tarmac for about 9 kms and at the cross road junction, take a right turn towards Motisar / Sattasar. Take a junction right at about 45kms later at Sattasar. The ideal suggested service point is around the IOC Petrol pump Sattasar.*	*S2*
Start of SS6	*Near Pilap Village (110 kms from end of SS5)*	*To service here you can escort competition vehicle from end of SS5. Service only on tarmac road. No service permitted on grit road.*	
	Option: 120 kms from Bikaner	*To come directly from Bikaner follow NH15 out of Bikaner towards Jaisalmer. At Gajner take cross road right to Khari village. Continue for 6km past the village of Khari. After a sharp bend on road a grit road goes towards the start of stage. Service location is on tarmac. Service vehicles do not go in to grit road.*	*S2*
End of SS6	*Near Bikampur Phanta (140 kms from end of SS5)*	*From IOC Pump at end SS5, head left and take a left again at cross road and continue along the IG Canal road. Continue to Bikampur Phanta (cross road) carry on this road towards Jaisalmer for another 15 ams to reach the end of SS6. Look for a appropriate wide spot to set up service point. Service only on tarmac.*	*S1*
	Option : 140 kms from Bikaner	*From Bikaner continue on NH15 towards Jaisalmer. After about 55kms you reach Kolayat, take a right from here towards Bajju. Continue past Bajju and at IG Canal road take a left turn and continue for 40kms to Bikampur Phanta, and then another 15 kms to SS6 end.*	
Night halt	*Jaisalmer (180 kms from end of SS6)*	*Escort competition vehicle to night halt from end of SS6. Along the Indira Gandhi Canal Road to Nachna, Mohangarh, Kanod, Hamira and finally to Jaisalmer.*	*S1 & S2*

LEG 3

SERVICE POINTS	*LOCATIONS*	*INSTRUCTIONS*	
End of SS7	*Sam Camp area about 5kms from end of SS9 (52 kms from Jaisalmer)*	*From Jaisalmer head towards the Sam road MDR53. At Sam dune area after paying entry tax turn right on the second tarmac road. The end of SS07 is about 3kms down this road on your right. Plan service point on a wide spot on the tarmac road. Nearest fuel point is in Jaisalmer city.*	*S2*
Start of SS8	*Near Maliawas (20kms from Sam village)*	*Exit Jaisalmer toward Sam on MDR53. Reach Sam village after crossing all camp sites and camel points. Take right towards Turkon Ki Basti and carry on for 20kms to Maliawas. Start of SS08 is left off the tarmac road to Maliawas. Nearest fuel point is in Jaisalmer city.*	*S1*
End of SS9	*Near Sam Village.*	*Head back towards Sam village on the same road and plan service at any point 2 Kms short of the Sam village.Nearest fuel point is in Jaisalmer city.*	*S1*
End of SS10	*Near Hadda*	*Head back towards Jaisalmer on MDR53. Cross Jaisalmer and take bye-pass road to Industrial area. From Industrial Area round about head away from Jaisalmer towards Hadda. 2Kms before 'Hadda' village near the SS10 end plan service point. Service only on tarmac.*	*S2*
Night Halt	*At Jaisalmer (25 kms from end of SS9)*	*Follow competitors to night halt from end of SS10*	*S1&S2*

LEG 4

SERVICE POINTS	*LOCATIONS*	*INSTRUCTIONS*	
Start of SS11	*Near Baap (195 kms from Jaislamer)*	*Follow competitors to start of SS11. Give service along the main Jaisalmer - Bikaner highway . The service vehicles should not turn left into Baap town.*	*S2*
End of SS11	*Near Nokhra (40 kms from Baap towards Bikaner)*	*Follow competitors towards start of SS11. Carry on the highway towards Bikaner, plan service point 40 ams from Baap on NH11. Service vehicles are forbidden to enter the grit road.*	*S1*
Start of SS12	*Near Bikampur Phanta (235 kms from Jaisalmer)*	*Follow NH15 towards Bikaner. At 200 kms watch for road sign "Baap / Nokha" Take a left turn and continue for 35kms to start of SS12 on your left. For refuelling the Fuel pump at Bikampur is 6kms straight on.*	*S1*
	Option: 75kms from end of SS11 at Nokhra	*At Baap head towards Nokh / Bikampur. The start of SS12 is 35kms ahead towards Bikampur on left of the road.*	
End of SS12	*Near Pilap Village (115 kms from Baap)*	*Follow NH15 towards Bikaner. At 100 kms watch for road sign "Khari Phanta" Take a left turn and continue beyond village Khari to village Pilap. SS12 ends on the grit road coming from left. Service only on tarmac road. No service permitted on grit road.*	*S2*
Night Halt	*Sadul Club, Bikaner*	*Follow competitors back to Bikaner night halt.*	*S1 & S2*
	130kms from end of SS12	*Continue on NH15 towards Bikaner night halt.*	

LEG 5

SERVICE POINTS	*LOCATIONS*	*INSTRUCTIONS*	
Start of SS13	*Near Jamsar (35 kms)*	*Escort competition vehicle to start of SS12.*	*S1*
End of SS13	*Near Rajasar (100 kms from Bikaner)*	*Exit Bikaner on NH15 heading towards Lunkaransar . Continue on this road for 65kms. Take a sharp left towards "Sattasar / Chattargarh" on a SH6A. At the 35 km mark, just after Rajasar is end of SS13 on your left. Give service only on tarmac.*	*S2*
Start of SS14	*Near Nathwana*	*Follow competition vehicle from end of SS13 to towards the start of SS14 by driving back to NH11, turning left for Lunkaransar. From here turn right over railway crossing to Kalu and then 1.5 Km later turn left towards Nathwana. Service only between Lunkaransar and village Nathwana.* <u>*No service vehicles beyond this on grit/dirt road.*</u>	*S2*
End of SS14	*Near Garabdsesar*	*At Lunkaransar leave NH15 and cross railway line on right towards Sardarshahar. Continue on SH6 for 20 kms till Kalu. Service around HP Petrol pump on left. The SS13 ends just before the petrol pump on the left of road.*	*S1*
End Jaipur	*315 kms from end of SS13*	*Follow competition vehicle to end of leg. Free service anywhere.*	*S1 & S2*

TIME SCHEDULE

XTREME - MOTO/QUAD

TC #	TC NAME	SS	LIAISON	TOTAL	TIME ALLOWED	AVG. SPEED	FIRST	
							XTREME	MOTO
	LEG 1a							**24 & 25 FEB'14**
0	Sardarshahar Start						22:30	N.A.
	SS 1							
1	SS 1 Kundiya Start In		32.63	32.63	00:45	43.51	23:15	N.A.
	SS 1 Kundiya Start Out				00:03			
1a	SS 1 Amarsar FF	26.76						
	SS 2							
2	SS 2 Kalu Start In		53.89	80.65	02:00	40.33	01:18	N.A.
	SS 2 Kalu Start Out				00:03			
2a	SS 2 Siwani FF	59.16						
2b	Sardar Shahar RG In		29.52	88.68	02:30	35.47	03:51	N.A.
	LEG 1b							**25 FEB'14**
2c	Sardar Shahar RG Out						08:00	07:00
	SS 3							
3	SS 3 Sardarshahar Start In		11.65	11.65	00:20	34.95	08:20	07:20
	SS 3 Sardarshahar Start Out				00:03			
3a	SS 3 Sardarshahar FF	3.36						
	SS 4							
4	SS 4 Amarsar Start In		36.99	40.35	01:30	26.90	09:53	08:53
	SS 4 Amarsar Start Out				00:03			
4a	SS 4 Nathwana FF	105.41						
4b	Bikaner in 1		82.47	187.88	05:00	37.58	14:56	13:56
	LEG TOTAL	**194.69**	**247.15**	**441.84**	**12:17**			

2014

northern motorsport

TIME SCHEDULE

XTREME - MOTO/QUAD

TC #	TC NAME	SS	LIAISON	TOTAL	TIME ALLOWED	AVG. SPEED	FIRST	
							XTREME	MOTO
	LEG 2							**26 FEB'14**
4c	Bikaner Restart 1						05:30	07:00
	SS 5							
5	SS 5 Jamsar Start In		37.21	37.21	01:00	37.21	06:30	08:00
5	SS 5 Jamsar Start Out				00:03			
5a	SS 5 Chatargarh FF	64.08						
	SS 6							
6	SS 6 Pilap Start In		108.83	172.91	04:15	40.68	10:48	12:15
6	SS 6 Pilap Start Out				00:03			
6a	SS 6 Bodhana FF	105.72						
6b	Jaisalmer In 1		173.00	278.72	06:30	42.88	17:21	18:48
	LEG TOTAL	**169.8**	**319.04**	**488.84**	**11:51**			

2014

northern motorsport©

TIME SCHEDULE

XTREME - MOTO/QUAD

TC #	TC NAME	SS	LIAISON	TOTAL	TIME ALLOWED	AVG. SPEED	FIRST	
							XTREME	MOTO
	LEG 3							**27 FEB'14**
6c	Jaisalmer Restart 1						06:00	07:30
	SS 7							
7	SS 7 Hadda Start In		27.62	27.62	00:40	41.43	06:40	08:10
	SS 7 Hadda Start Out				00:03			
7a	SS 7 Lakmana FF	86.37						
	SS 8							
8	SS 8 Maliawas Start In		30.56	113.99	03:30	32.57	10:13	11:43
	SS 8 Maliawas Start Out				00:03			
8a	SS 8 Maliawas FF	1.22						
	SS 9							
	SS 9 Maliawas Start In		0.25	1.47			10:16	
9	SS 9 Maliawas Start Out				00:03			
9a	SS 9 SAM FF	24.29						
	SS 10							
10	SS 10 Lakhmana Start In		11.67	37.18	02:45	13.52	13:04	14:34
	SS 10 Lakhmana Start Out				00:03			
10a	SS 10 Hadda FF	86.25						
10b	Jaisalmer In 2		27.67	113.92	03:15	35.05	16:22	17:52
	LEG TOTAL	**198.13**	**97.77**	**294.18**	**10:22**			

2014

northern motorsport

TIME SCHEDULE

XTREME - MOTO/QUAD

TC #	TC NAME	SS	LIAISON	TOTAL	TIME ALLOWED	AVG. SPEED	FIRST	
							XTREME	MOTO
	LEG 4							**28 FEB'14**
10c	Jaisalmer Restart 2						04:30	05:30
	SS 11							
11	SS 11 Baap Start In		203.37	203.37	04:00	50.84	08:30	09:30
	SS 11 Baap Start Out				00:03			09:33
11a	SS 11 Nokhra FF	44.31						
	SS 12							
12	SS 12 Bodhana Start In		84.58	128.89	02:30	51.56	11:03	12:03
	SS 12 Bodhana Start Out				00:03			12:06
12a	SS 12 Pilap FF	105.43						
12b	Bikaner In 2		50.95	156.38	04:00	39.10	15:06	16:06
	LEG TOTAL	**149.74**	**338.9**	**488.64**	**10:36**			

2014

northern motorsport©

TIME SCHEDULE

TC #	TC NAME	SS	LIAISON	TOTAL	TIME ALLOWED	AVG. SPEED	FIRST	
							XTREME	MOTO
	LEG 5							**1 MAR'14**
12c	Bikaner Restart 2						03:00	05:25
	SS 13							
13	SS 13 Jamsar Start In		37.21	37.21	01:00	37.21	03:50	N.A.
	SS 13 Jamsar Start Out				00:03			
13a	SS 13 Rajasar FF	36.23						
	SS 14							
14	SS 14 Nathwana Start In		54.53	90.76	02:30	36.30	06:23	07:25
	SS 14 Nathwana Start Out				00:03			07:28
14a	SS 14 Garabdesar FF	38.44						
14b	Jaipur End		327.12	365.56	07:00	52.22	13:26	14:28
	LEG TOTAL	**74.67**	**418.86**	**493.53**	**10:36**			

MARUTI SUZUKI DESERT STORM
northern motorsport

WAIVERS GRANTED FOR MOTO/QUAD

1. The transportation of motorcycles and quads is permitted in all liaison stages.

2. It is not mandatory to have turn signal lamp assy installed.

3. The use of a mousse tube in the tyres is permitted.

4. It is not mandatory to have rear view mirror on handlebars.

---

northern motorsport

FEW POINTS OF IMPORTANCE FOR COMPETITORS

Two belt cutters must be carried on board at all times. They must be easily accessible for the driver and co driver when seated with their harnesses fastened.

Where the occupants' bodies could come into contact with the safety cage, flame retardant padding must be provided for protection.

As for the outside, the triggering system of the circuit breaker must compulsorily be situated at the lower part of the windscreen mountings for closed cars. It must be marked by a red spark in a white-edged blue triangle with a base of at least 12 cm.This outside triggering system only concerns closed cars.

At least two additional safety fasteners must be fitted for each of the bonnet and boot lids.The original locking mechanisms of the bonnet must be rendered inoperative or removed.

The harness lap straps must fit tightly in the bend between the pelvic crest and the upper thigh. Under no conditions must they be worn over the region of the abdomen.

While participants are advised to wear flame resistant clothing, as well as use FHR and HANS devices it is not mandatory.

All helmets need to be FIA approved and any painting and decorative branding on the same has to be as per manufacture guidelines. Paints may react with helmet materials and affect its protective capacity.

LIST OF APPROVED TECHNICAL WAIVERS FOR THE MARUTI SUZUKI DESERT STORM 2014

1) It is not mandatory to install automatic pressure sensitive fuel cutoff systems.
2) Fuel used in competing vehicles needs to comply with Govt. of India Regulations and that it be sold through commercial outlets.
3) 4 point safety harness be allowed in lieu of 5/6 point.
4) Main and auxiliary fuel tanks installed in T1 & T2 vehicles need not be FIA approved FT3/3.5/5 standards .
5) Fire extinguishers installed in the competing vehicle need not be FIA approved but be of ABC dry powder type and must meet ISI/BIS approved standards.
6) While advised, it is not mandatory to install FIA homologated fire extinguishing systems.
7) Roll cages installed in competing vehicles need not be FIA homologated but should comply with FIA guidelines and FMSCI regulations.
8) It is not mandatory to install safety indicator lamp/system.
9) It is not mandatory for roll cage padding to comply with FIA 8857-2001 standards, as long as its fire retardant .
10) Wheel rims need not be cast aluminum alloy and have no weight limitations if they meet OE specification or are from a BIS/DOT approved manufacturer.
11) It is not mandatory that the fuel pump pressure be 1 bar .
12) Supercharging/ turbocharging of petrol and diesel engines is allowed, subject to fitment of the relevant air restrictor and FIA approved CC classification adjustment .
13) It is not mandatory to install additional fog lamps conforming to ECE R30 standards.
14) It is not mandatory to have fuel,lubricating and other fluid lines having burst pressures minimum of 70 bars as long as they meet OE equipment standards.
15) It is not mandatory that the end connectors of such flexible lines should have threaded connectors as long as they meet or exceed OE equipment standards.
16) If the windscreen is glued, it is not mandatory to make it possible to remove the front doors or the windows of the front doors from inside the cockpit without using tools.

northern motorsport

MARUTI SUZUKI MOTOR SPORT
POWERED BY PERFORMANCE
PB 06 L 7600
MARUTI
GARMIN
MOTORSPORT.in
northern motorsport
XSO
XTREME SPORTS ORGANIZATION